

# **First /Second Street Corridor Study - Community Meeting**

**September 30, 2021 | City of Cambridge**

## **Ask a Question after the Presentation**

- Type questions in the Q and A box

## **We are Recording**

- The webinar will be recorded and posted online afterward

## **Cameras + Microphones**

- Your camera and microphones are off

## **Contact Information**

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**[cambridgema.gov/first-second-street](https://cambridgema.gov/first-second-street)**

# Meeting Purpose, Outcomes and Process

## Purpose

- To present the overview of the study and receive feedback on concept plans First Street.

## Outcome

- Obtain community feedback on the street concepts.

## Process

- City will consider comments and determine which concept to advance.

# First /Second Street Corridor Study: Community Meeting

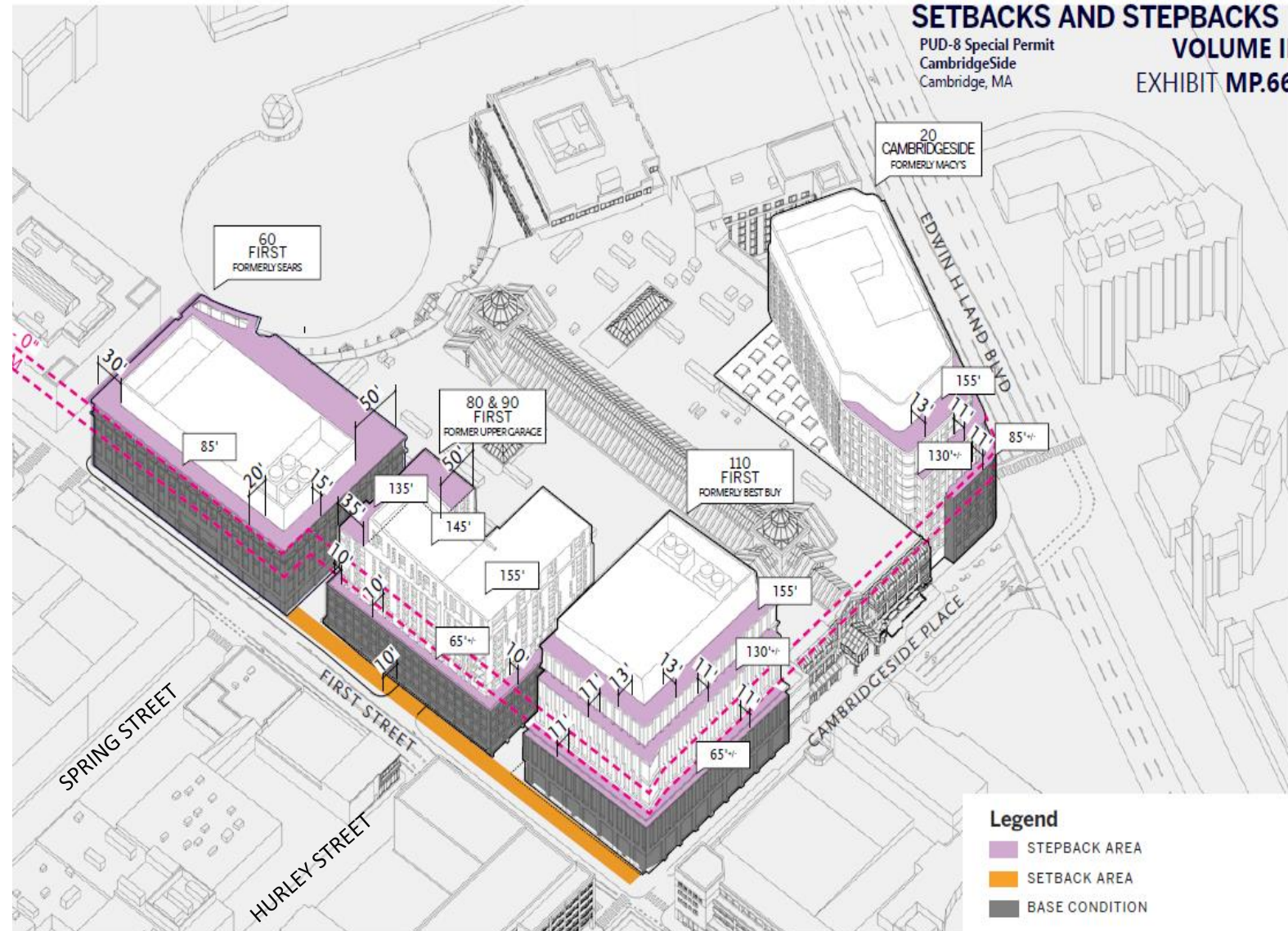
## Meeting Agenda

- Background, Purpose and Goals
- City Plans/Policies and Context
- Study Process, Status, and Input
- Street Design Considerations
- Concepts: Considerations & Trade-Offs
- Next Steps
- Q & A

# **Study Background and Purpose**

# New Opportunity

- CambridgeSide 2.0 redevelopment
- Opportunity to rethink the street



# Study Details

## Primary Objective

- Safe and comfortable north/south travel

## Study Outcomes

- 10% concept plan



# Project Goals

## Safety & Experience

Improve safety and experience for all users

## North/South Bike Connectivity

Provide north/south connection for people of all ages and abilities who are biking between Kendall Square and Lechmere/North Point

## Bus Connection Lechmere to Kendall

Ensure that plans account for future bus connection between Lechmere and Kendall Square, and points beyond

## Ped & Vehicle Access

Maintain pedestrian and motor vehicle access for individuals and emergency response

## Manage Curb

Manage curbside uses, including residential parking on Second Street

## Tree Plantings

Identify opportunities for additional tree plantings

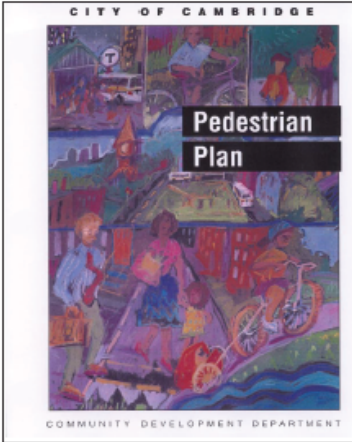
## Alignment with City Plans & Policies

Ensure that plans are in line with City's plans and policies including Vision Zero, Complete Streets, Envision Cambridge, Vehicle Trip Reduction Ordinance, and the Cambridge Growth Policy



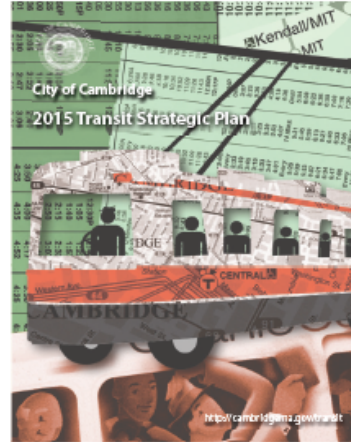
# City Policies and Plans

*The City has a number of plans and policies that inform all of our work.*



## Pedestrian Plan

provides policies and guidelines for facilities that will make walking safer, easier, and more attractive; and provides design standards for physical improvements



## Transit Plan

provides City goals and objectives to improve transit in Cambridge in order to meet economic development goals, livability, social equity, and environmental objectives



## Bicycle Plan

provides the framework for developing a network of Complete Streets and supporting programs and policies that will help enable people to bike safely and comfortably in the city



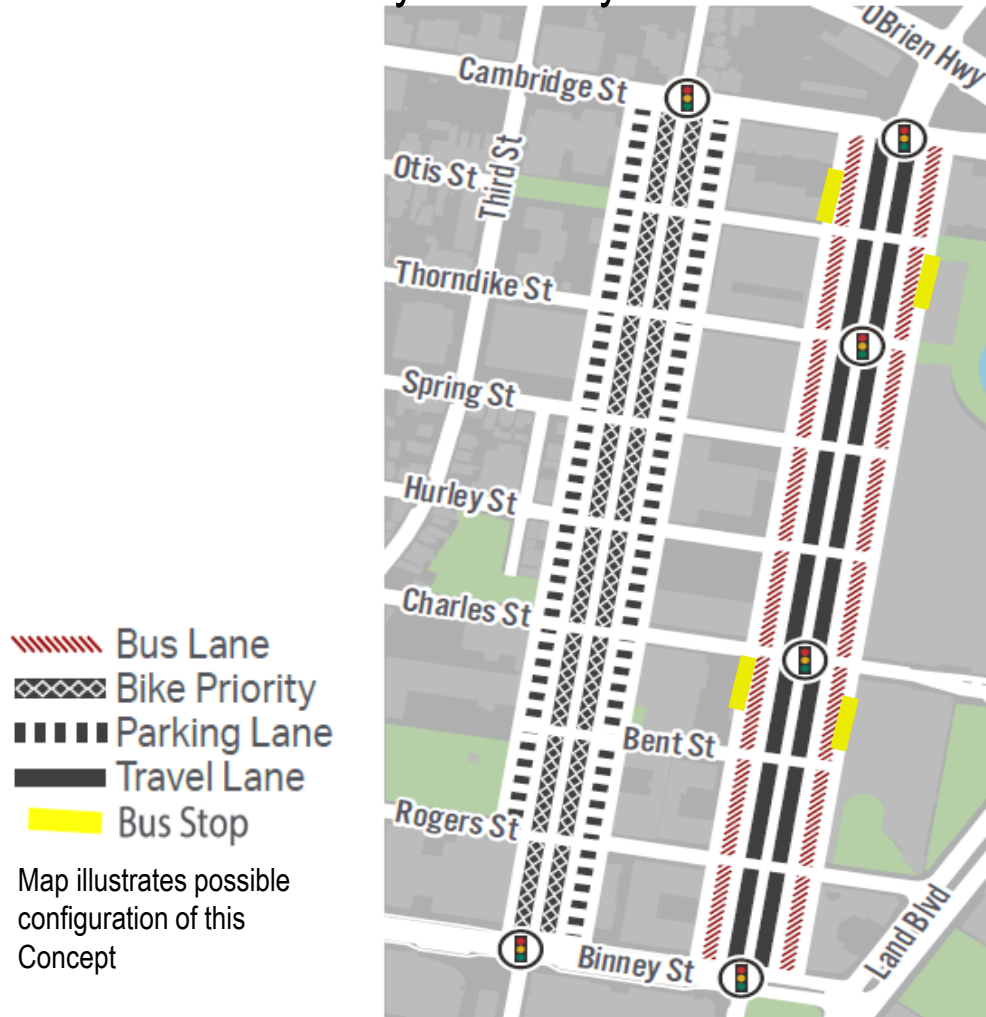
## Vision Zero

the City's approach to eliminating transportation-related fatalities and severe injuries through prevention strategies

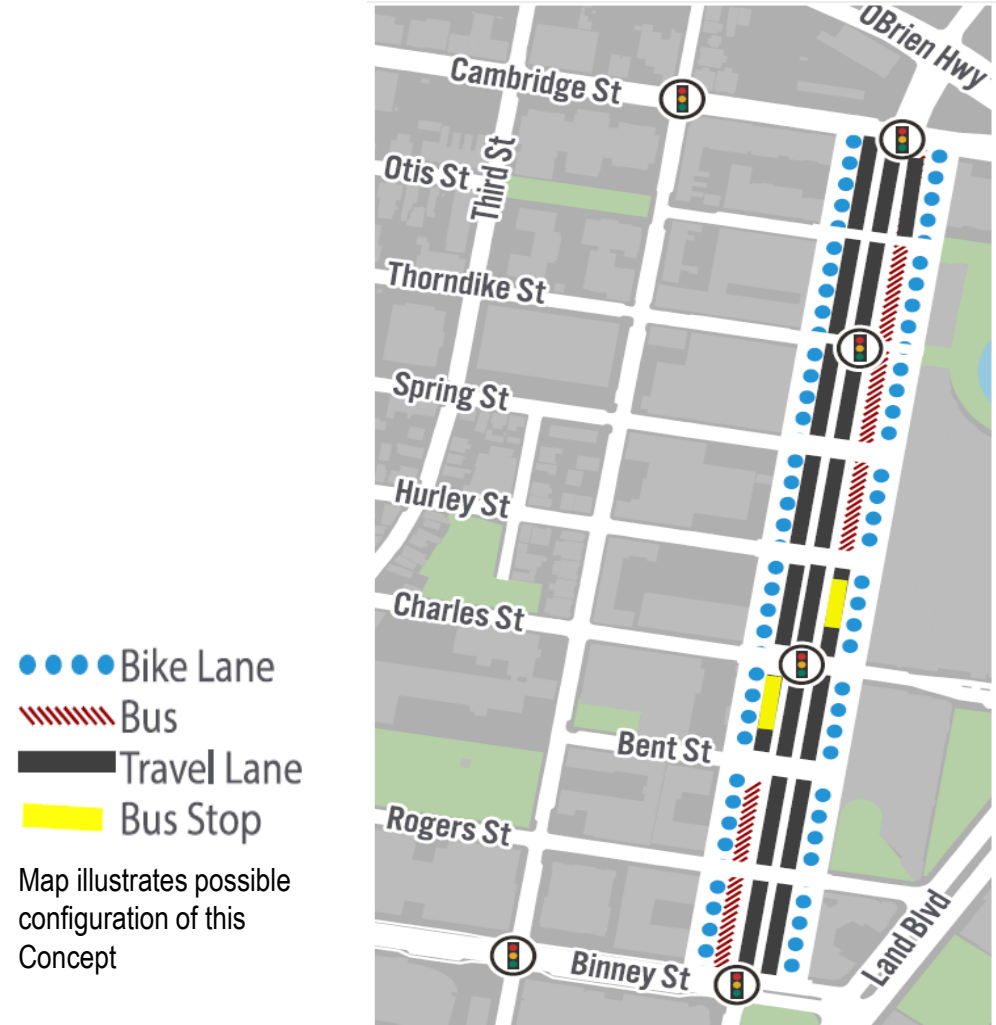


# Two Current Design Concepts

**Concept 1:** Two Bus Lanes on First Street paired with Bicycle Priority Street on Second Street



**Concept 2:** One Bus Lane + Separated Bike Lanes on First Street

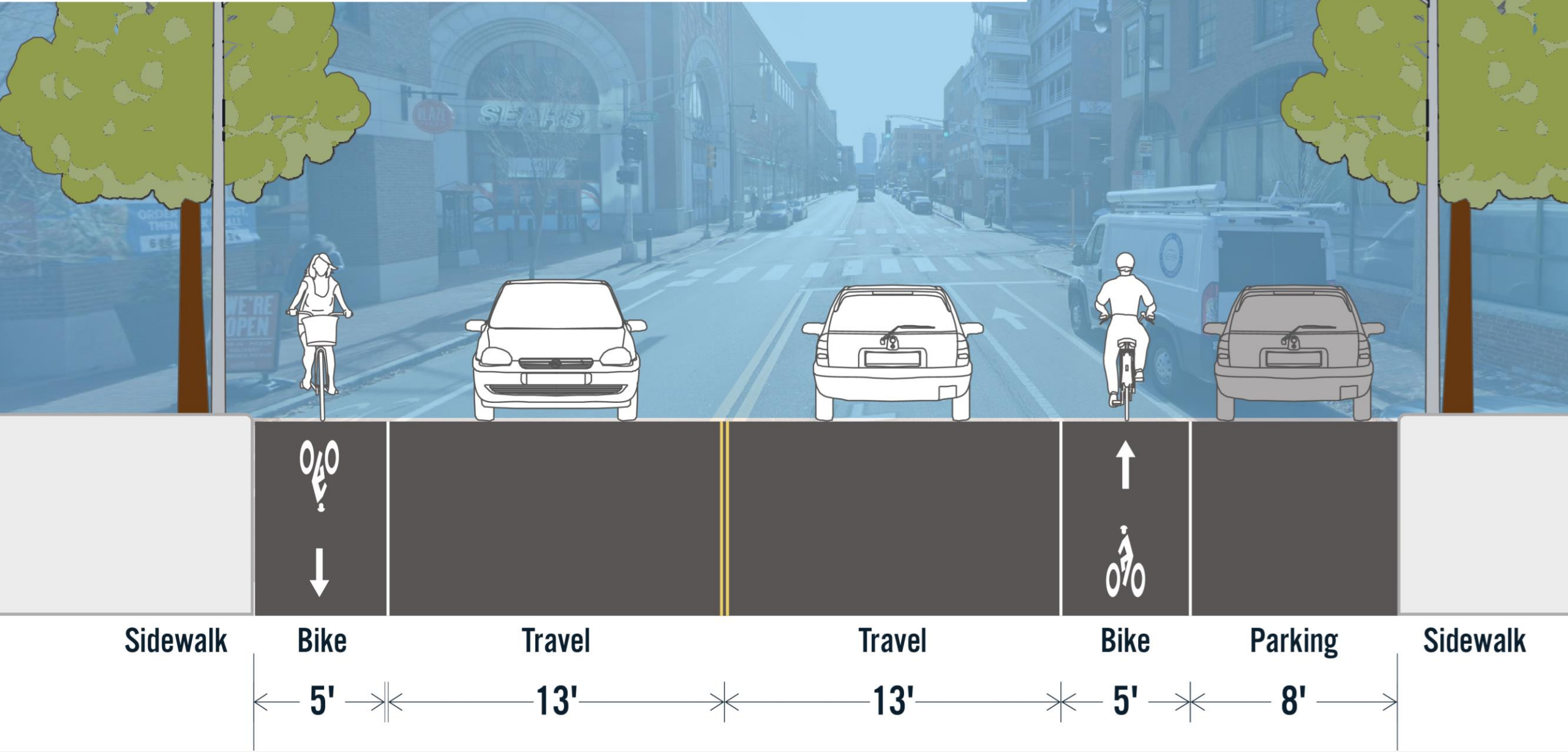


# First Street Context



# Cross Section: First St at Thorndike St

Background image source: Google Street View of November 2020



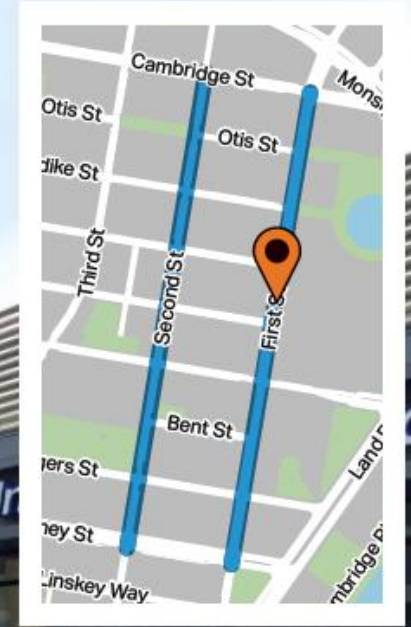


# First St at Cambridge St





# First St north of Hurley St



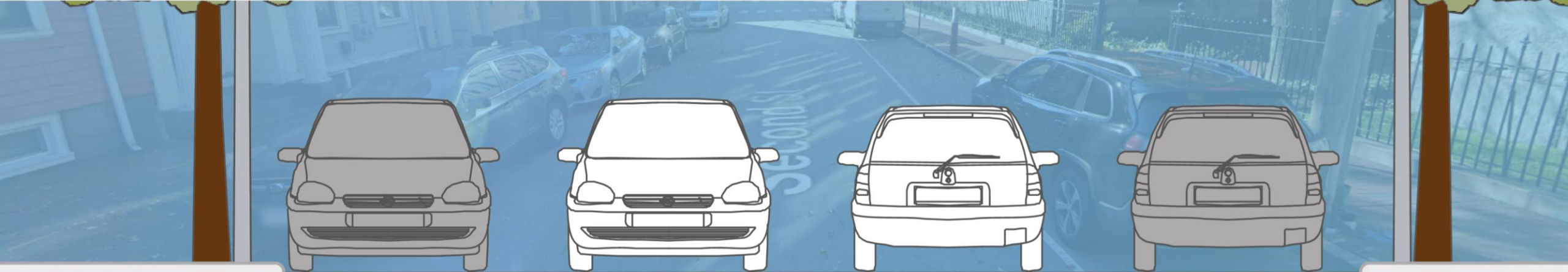
# Second Street Context





# Cross Section: Second St at Thorndike St

*Background image source: Google Street View of November 2020*



**Sidewalk**

**Parking and Travel**

**Sidewalk**

**33'**

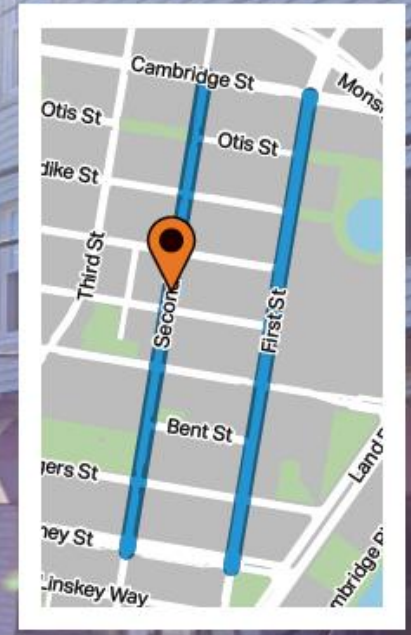


# Second St at Cambridge St





# Second St north of Hurley St



# **Study Process and Work to Date**

# Stakeholder Working Group Members

- Meeting 1: April 12, 2021
- Meeting 2: June 14, 2021

*The stakeholder working group was chosen to represent a cross-section of interests*

## East Cambridge Community

- Charles River TMA/EZRide Association
- East Cambridge Business Association
- East Cambridge Planning Team
- East Cambridge residents
- Kendall Square Association

## Property Owners

- Alexandria Real Estate
- Leggat McCall Properties
- Helmand Restaurant
- New England Development
- Urban Spaces, LLC

## City Advisory Committees

- Bicycle Committee
- Pedestrian Committee
- Transit Committee

## Advocacy Groups / Organizations

- Cambridge Bike Safety
- Livable Streets Alliance
- Transit Matters
- Walk Boston



# Stakeholder Working Group Members (continued)

## City of Cambridge Departments

- Commission for Persons with Disabilities
- Community Development Department
- Fire Department
- Public Health Department
- Police Department
- Public Works Department
- Traffic, Parking, + Transportation

## Partners

- Cambridge Redevelopment Authority

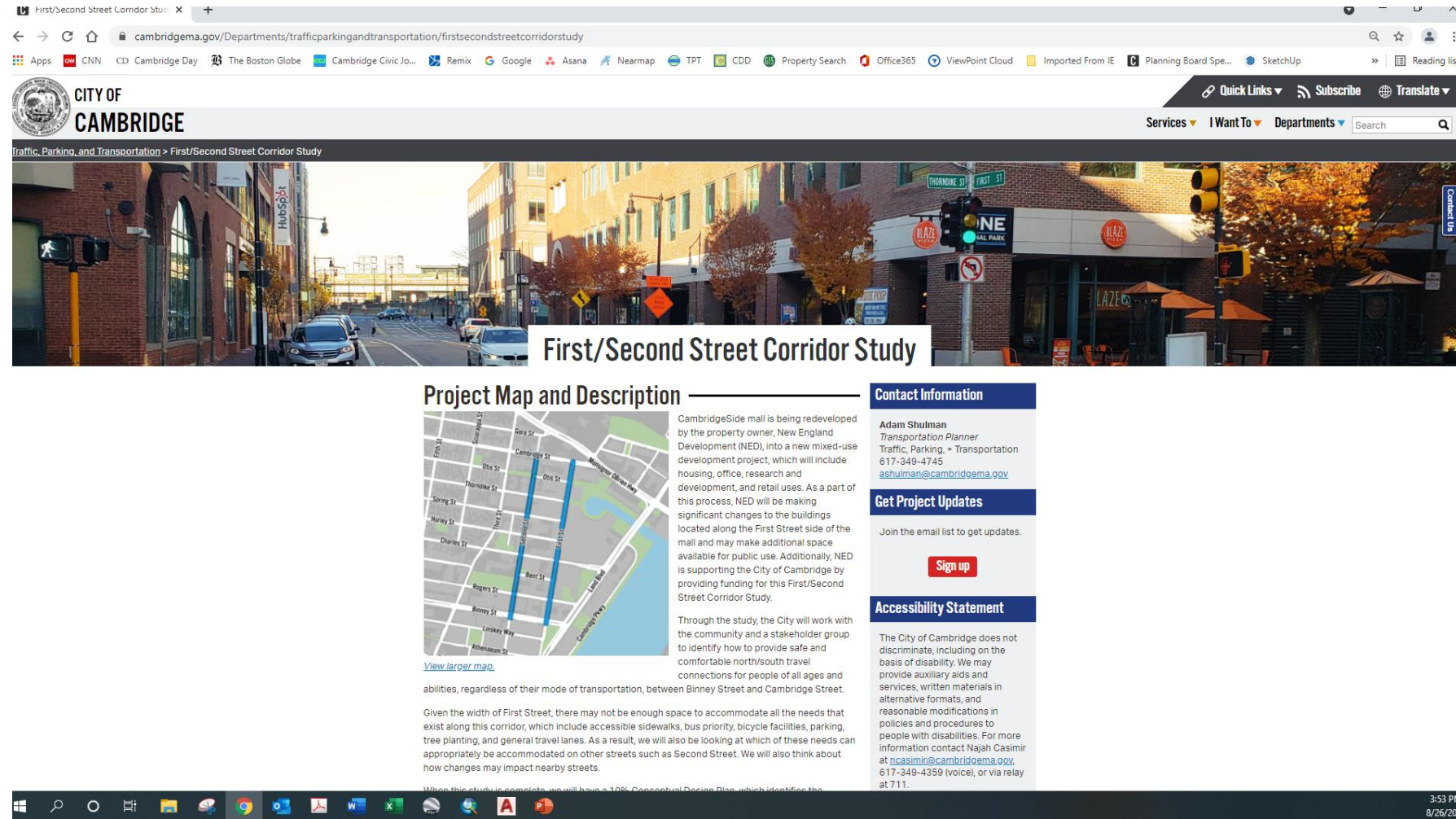
## State Agencies

- Department of Conservation and Recreation
- MassDOT
- MBTA



# Shared experience via study website

- Community survey on travel experience on First Street and Second Street



# User Survey Summary (273 responses)

## Pros, Cons, and Priorities for First and Second Street

**Better  
transit**

**Safe bike  
travel**

**Small  
Business  
Support**

**Maintain  
Residential Feel  
on Second St**

**Wider  
sidewalks**

**Trees and  
Greenery**

**Reduce  
Traffic**

**Blocked  
bike  
lanes**

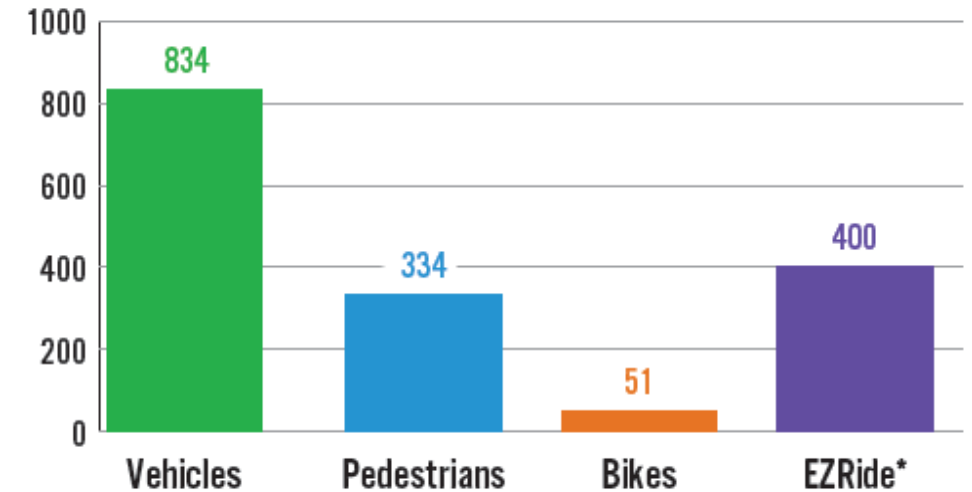
# Street Design Considerations

# Street Design Considerations

- Safety
- Crash History
- Traffic Condition
- Regional Connections
- Transit Frequency and Reliability
- Physical Characteristics
- Ongoing and Future Development
- First Street Connector to Monsignor O'Brien Highway

## First Street Volumes

by mode in the PM peak at Thorndike St<sup>1</sup>



Average daily traffic south of Spring St<sup>3</sup>  
7,000

\* Estimated total riders during the PM peak on First Street 2018-2019, Data source: Charles River TMA

<sup>1</sup>Data source: CambridgeSide 2.0 Traffic Impact Study; Count conducted May 2018

<sup>2</sup>Data source: CambridgeSide 2.0 Traffic Impact Study; Count conducted March 2019

<sup>3</sup>Count conducted May 2018

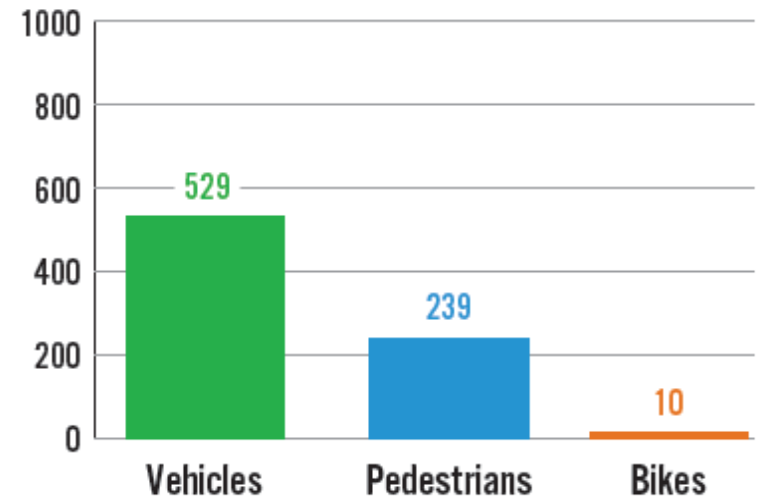
<sup>4</sup>Count conducted May 2016

# Street Design Considerations

- Safety
- Crash History
- Traffic Condition
- Regional Connections
- Transit Frequency and Reliability
- Physical Characteristics
- Ongoing and Future Development
- First Street Connector to Monsignor O'Brien Highway

## Second Street Volumes

by mode in the PM peak at Binney St<sup>2</sup>



Average daily traffic north of Charles St<sup>4</sup>  
3,100

<sup>\*</sup> Estimated total riders during the PM peak on First Street 2018-2019, Data source: Charles River TMA

<sup>1</sup>Data source: CambridgeSide 2.0 Traffic Impact Study; Count conducted May 2018

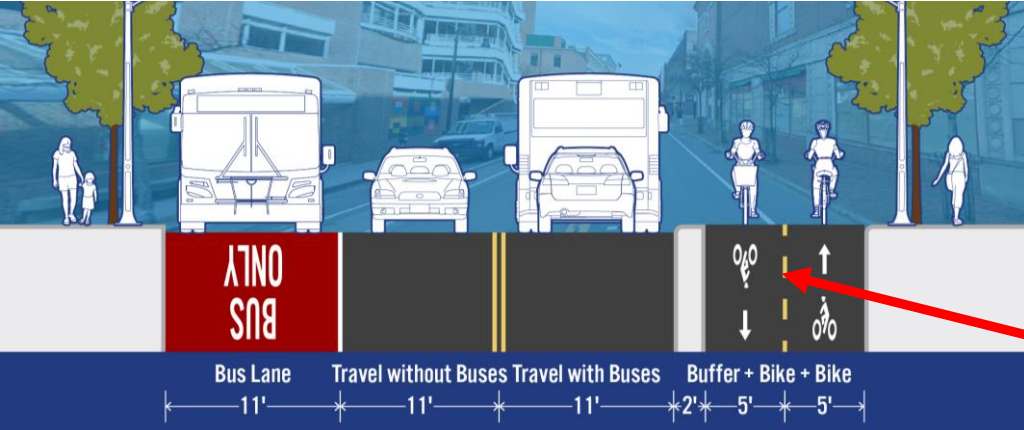
<sup>2</sup>Data source: CambridgeSide 2.0 Traffic Impact Study; Count conducted March 2019

<sup>3</sup>Count conducted May 2018

<sup>4</sup>Count conducted May 2016

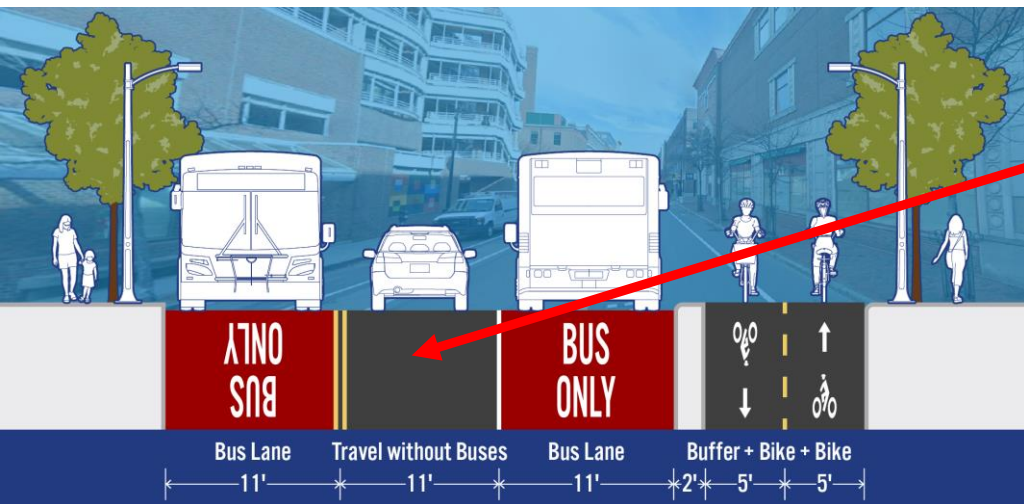


# We considered and determined not to advance some options



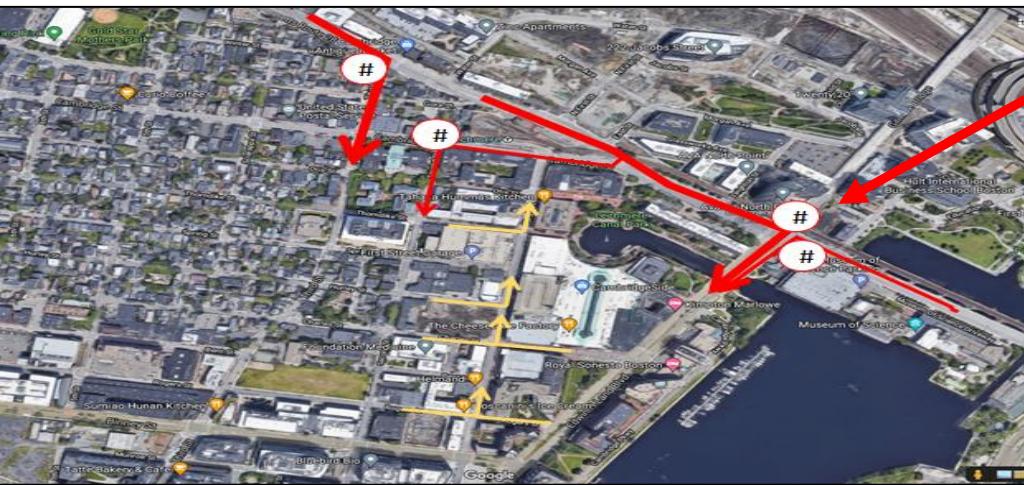
## Two-way separated bike lanes

- Complicates intersections and pedestrians' crossings



## Northbound only general travel lane, shift southbound travel to other streets

- Adds traffic
  - to other streets (Third St, Second St, Land Blvd.)
  - circulating around block with destination on First Street
- Conflicts with First Street connection to O'Brien Hwy



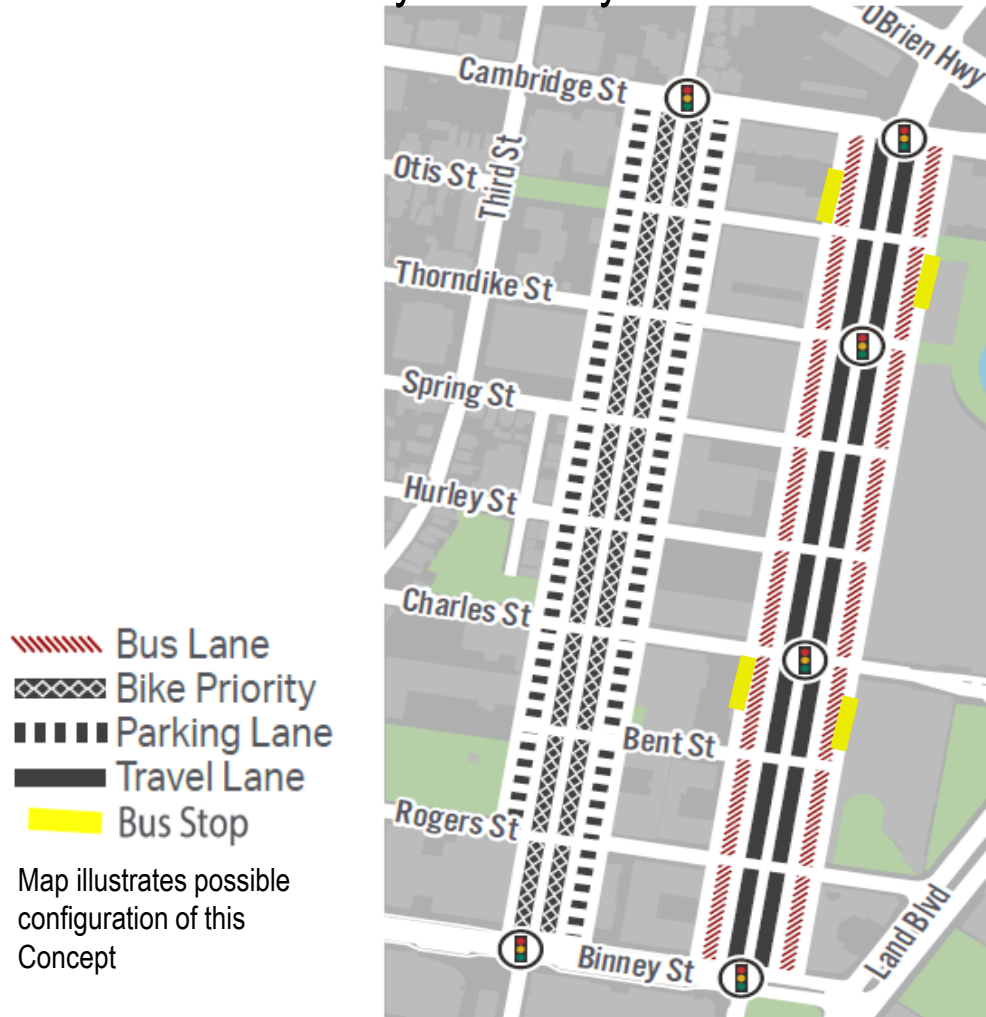
## Shift southbound buses to Land Blvd.

- Not precluded in either concept
- Support EZ-Ride bus stops on First Street for both directions
- MassDOT considering Land Blvd. for Silverline Bus Extension

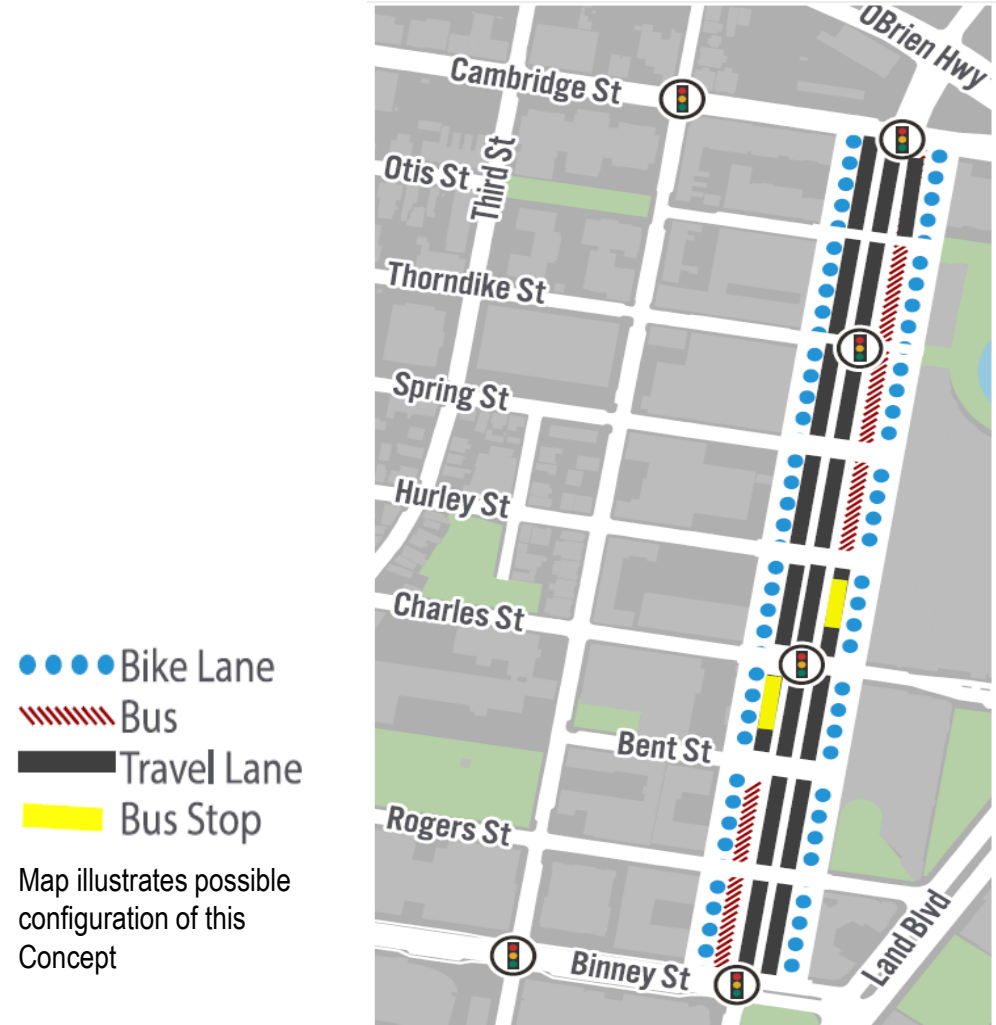


# Two Current Design Concepts

**Concept 1:** Two Bus Lanes on First Street paired with Bicycle Priority Street on Second Street



**Concept 2:** One Bus Lane + Separated Bike Lanes on First Street



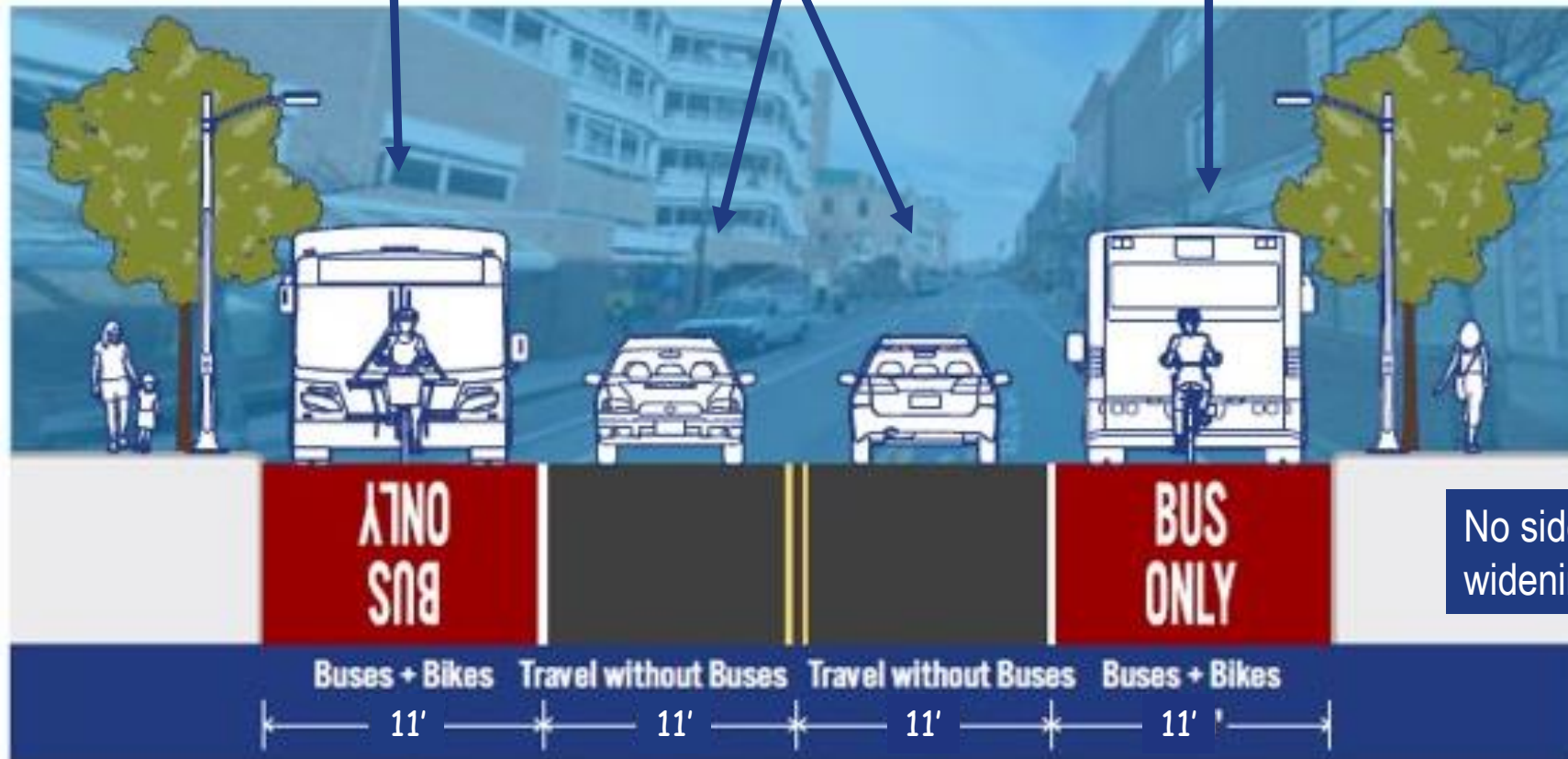
# Concept 1: First Street

- North/South Transit Priority Street

Bus lanes in each direction (portions of bus lane could be used for off-peak loading and pick-up /drop-off activities).

Maintains travel lanes in both direction.

People may bike  
on First Street.



No sidewalk widening.

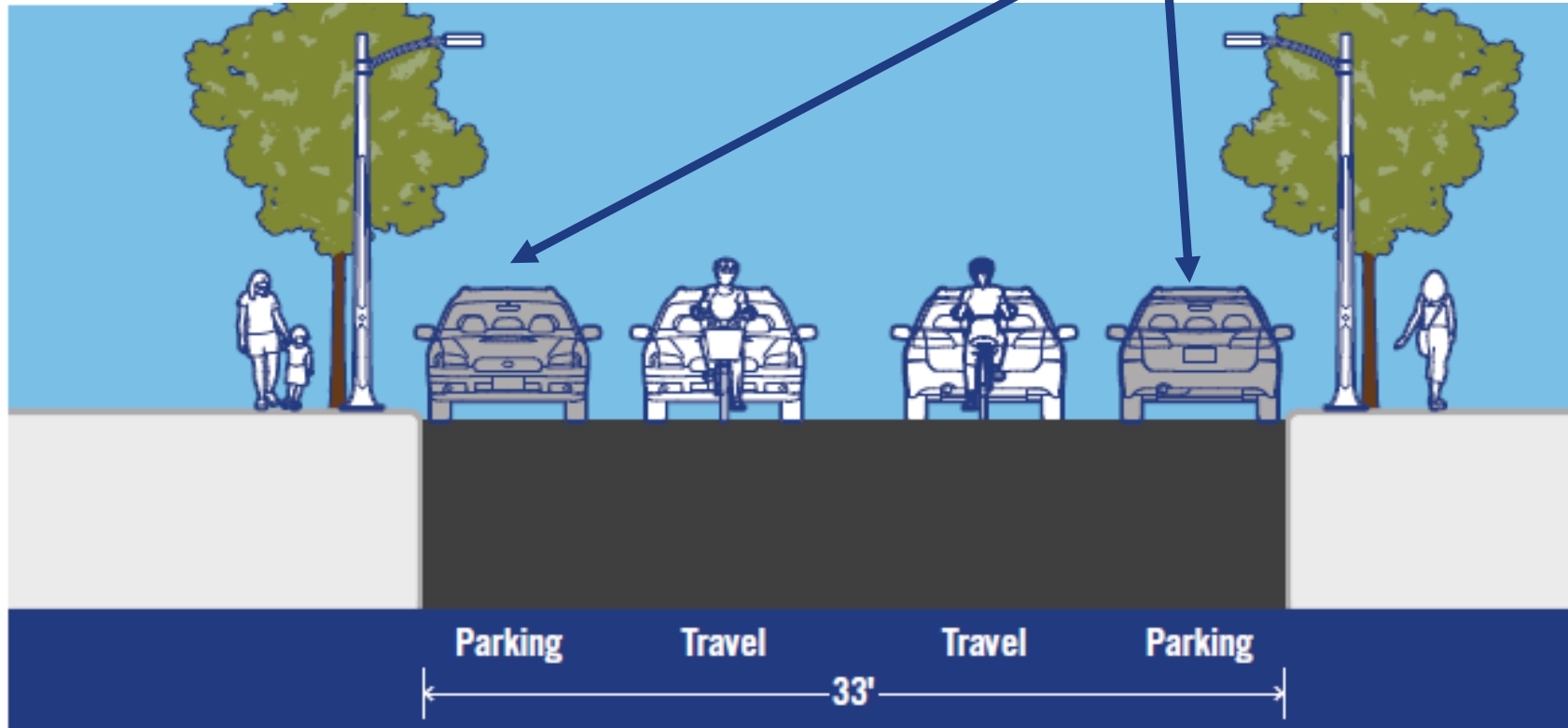
# Concept 1: Second Street

- North/South  
Bicycle Priority  
Street

Implement changes on Second Street to ensure

- low traffic volumes and low speeds
- for an all ages and all abilities **Bicycle Priority Street.**

Maintain on-street parking.



# **What is a Bicycle Priority Street?**

# A Bicycle Priority Street

- Gives priority to bicycles on roads with low traffic volumes and speeds
- Supports and enhances comfortable, safe bicycle travel for all ages and abilities
- Signs, pavement markings, and speed and volume management tools used to discourage vehicular trips
- Second Street can meet the Bicycle Priority Street criteria with speed and traffic volume reduction.



	Ideal Conditions for Bicycle Priority Street	Preferred Conditions for Bicycle Priority Street	Second Street South of Thorndike (2013 traffic counts)
PM Peak Hour	<150 vph	<300 vph	171 vph
Daily	<1,000 vpd	<2000 vpd	2100 vpd
Speed	<20 mph	<20 mph	(not available)

vph = vehicles per day



# Example Images



Diverter



One-way Street except bikes



One-way Street except bikes



Raised intersection



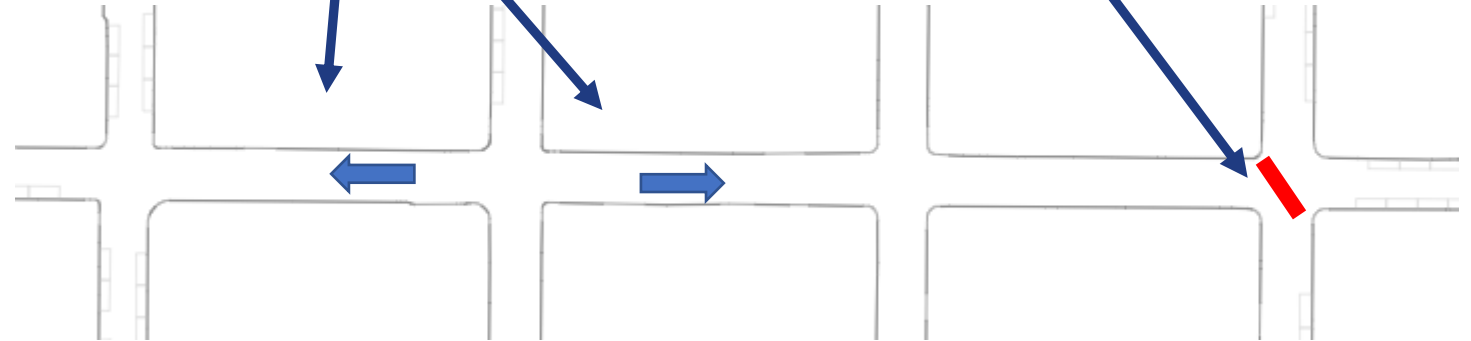
# What would Second Street look like as a Bicycle Priority Street?

- Like today, with measures to reduce traffic volumes and speeds
- Benefits to residents, pedestrians, and bikers
- Reduce daily vehicle traffic to less than 1,000 vehicles/day
- Key Tools (Diverters and one-way streets)
- Additional analysis needed to better understand traffic patterns and evaluate impacts of different tools

Measures to prevent cut through traffic

One-way Blocks, except bikes

Diverters (no through movement except bikes)



# **Why are Bus Lanes Needed on First Street?**

# Buses and Shuttles on First Street Today



- EZ-Ride



- Alexandria Shuttle

- Cambridgeside shuttle



## Ridership:

- Nearly 2,000 riders/day (pre-pandemic)

## Rush Hour Frequency:



- ~4 minute headways  
(15 buses per hour)

Without more buses, buses are likely to be over capacity in the near future.



- EZ-Ride ridership grew 2014-2019
- Buses at capacity in morning

*Data source: Charles River TMA 2019 data and Alexandria Shuttle Data as reported in 325 Binney St TIS*

*Bus frequency includes EZ Ride and Alexandria shuttles*

- EZ-Ride bus on First Street



[https://en.wikipedia.org/wiki/EZRide#/media/File:EZRide\\_bus\\_in\\_East\\_Cambridge,\\_November\\_2018.jpg](https://en.wikipedia.org/wiki/EZRide#/media/File:EZRide_bus_in_East_Cambridge,_November_2018.jpg)



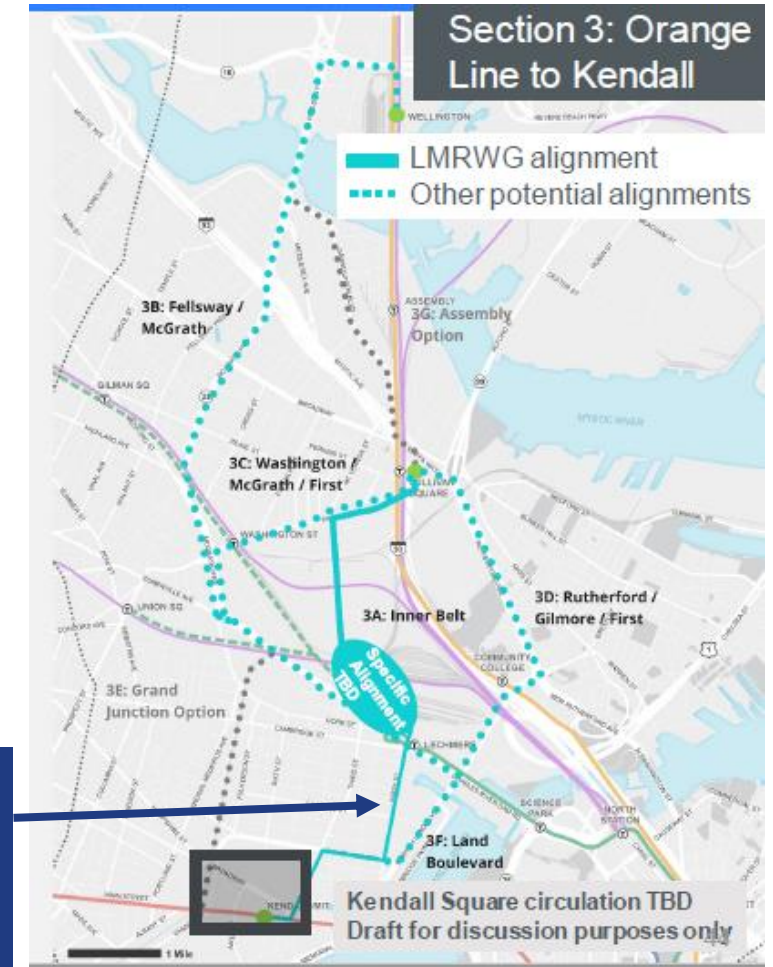
# Improved Transit Service on First Street

- MBTA Bus Network Redesign
  - Potential new frequent bus corridor between Lechmere and Kendall
  - Additional 6 to 10 buses per hour
- MassDOT Silver Line bus rapid transit
  - Chelsea to Kendall Square
  - Additional 4 to 10 buses per hour
- New and Expanded bus routes recommended by various transportation studies

## Per the Envision Cambridge Mobility Plan

Partner with surrounding communities to create multijurisdictional bus rapid transit and bus priority routes. For example, collaborate with...Arlington on Route 77 improvements

First Street is being considered as part of a regional transit network



Silver Line Extension alternative routes in study

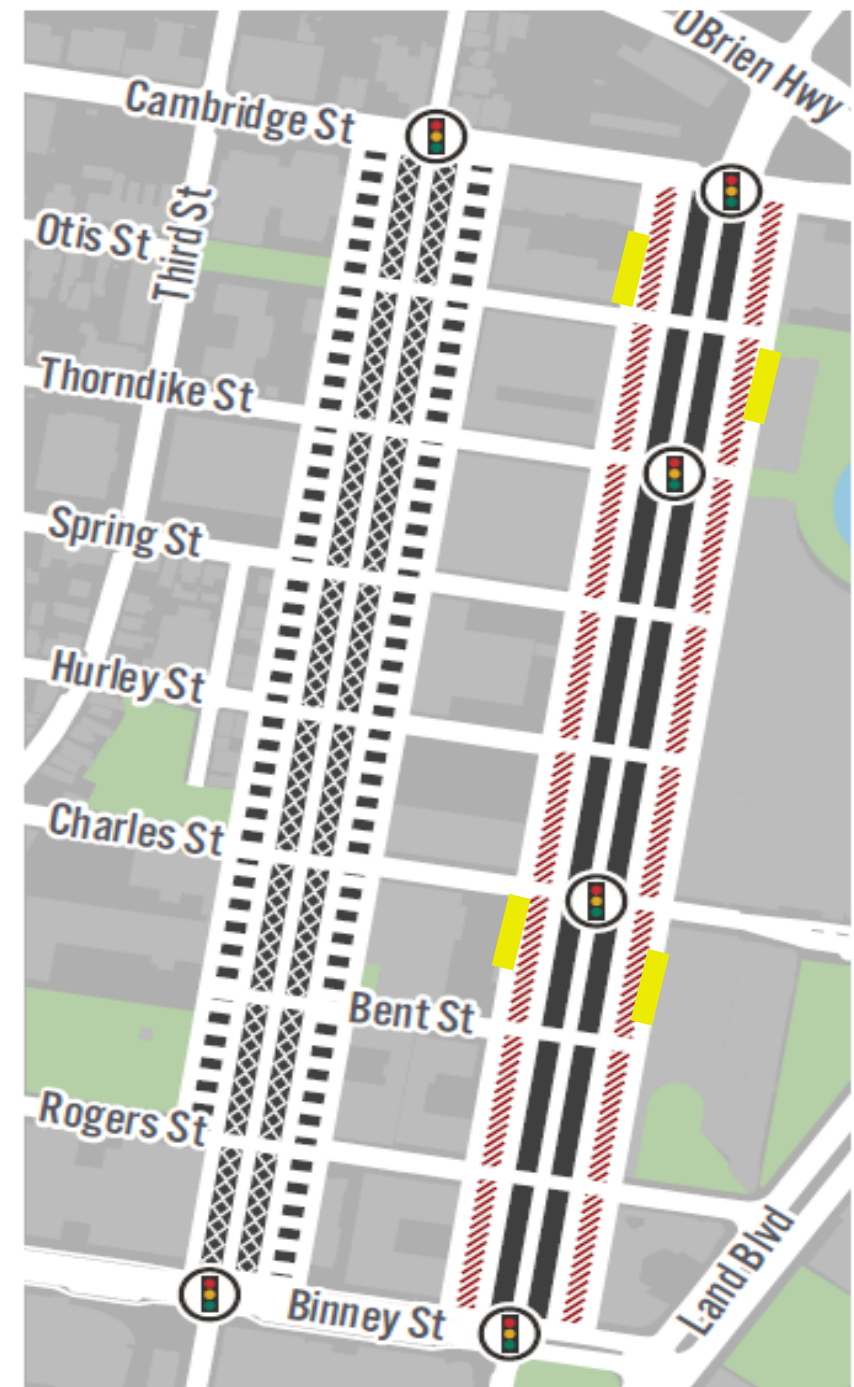
# Concept 1: Summary

## North/South Travel Between Binney Street and Cambridge Street

- First Street: Transit Priority Street
- Second Street: Bicycle Priority Street

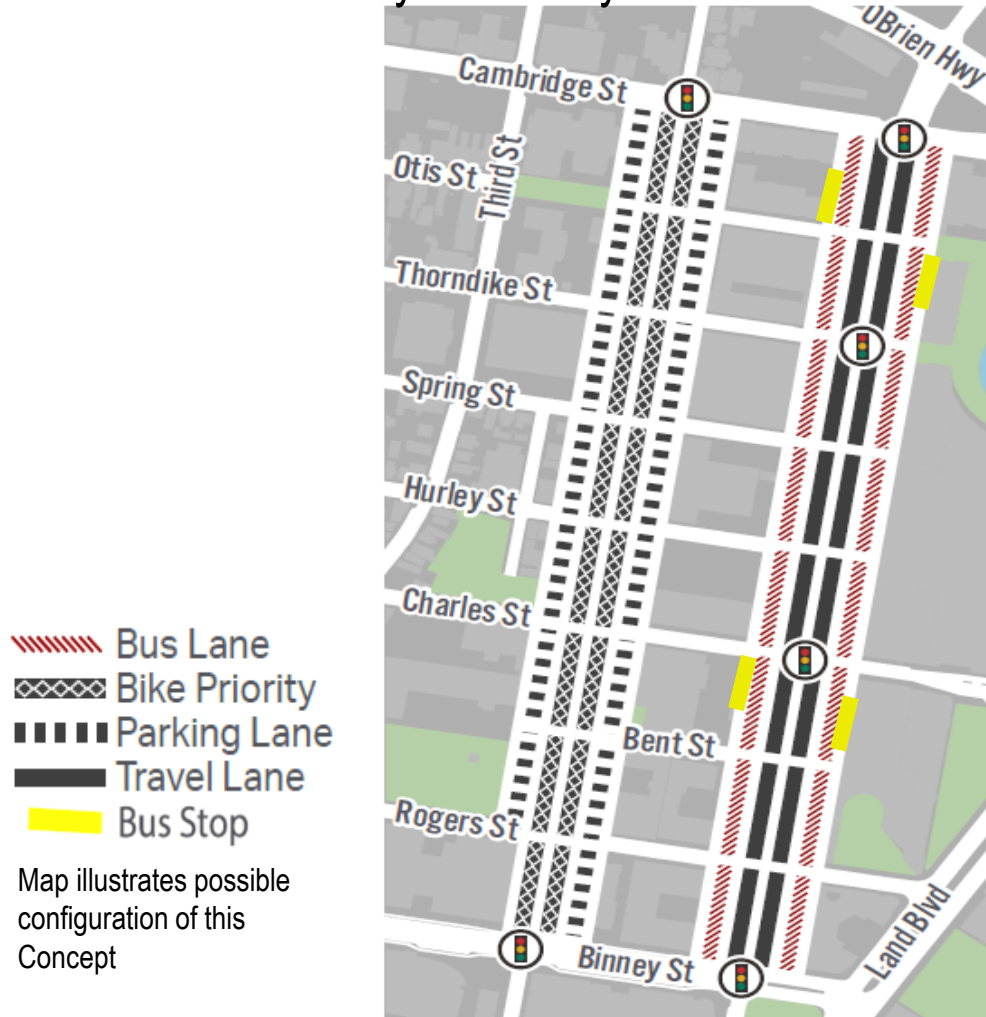


Map illustrates possible configuration of this Concept

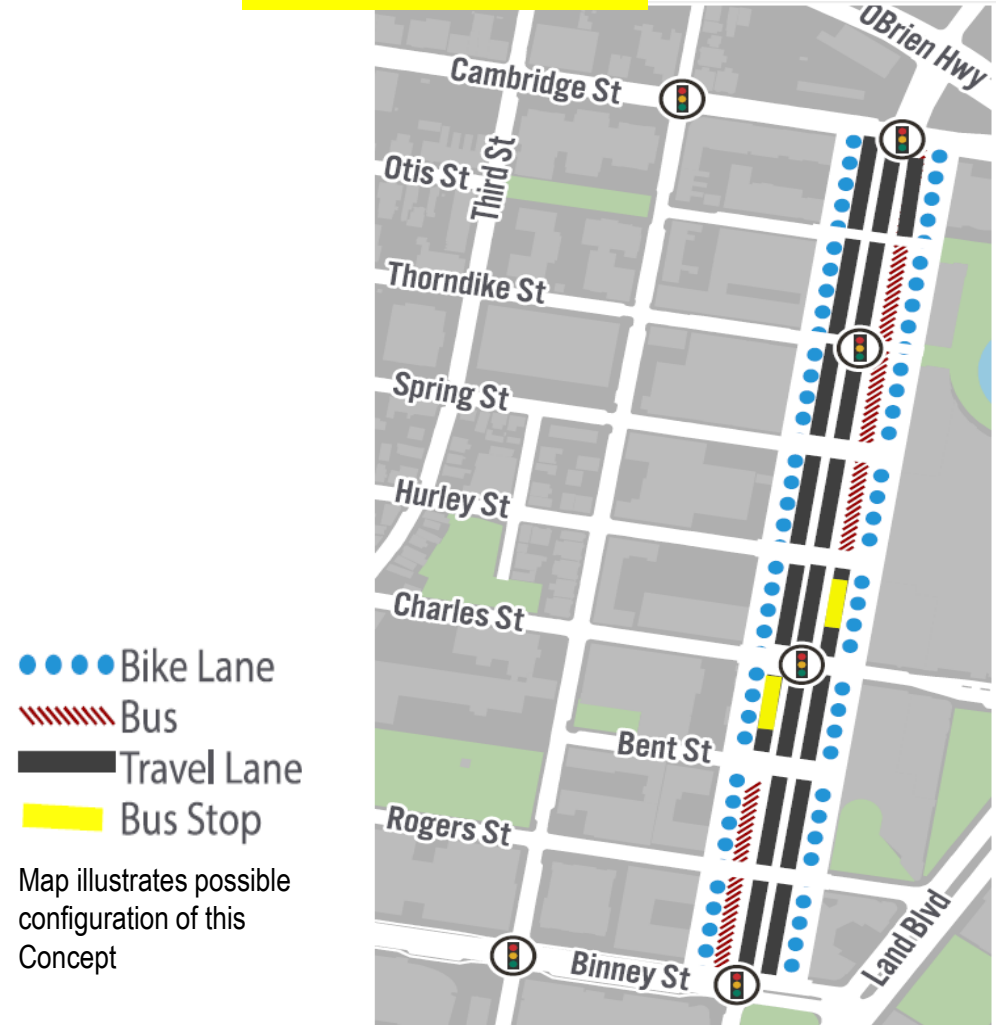


# Two Current Design Concepts

**Concept 1:** Two Bus Lanes on First Street paired with Bicycle Priority Street on Second Street



**Concept 2:** One Bus Lane + Separated Bike Lanes on First Street



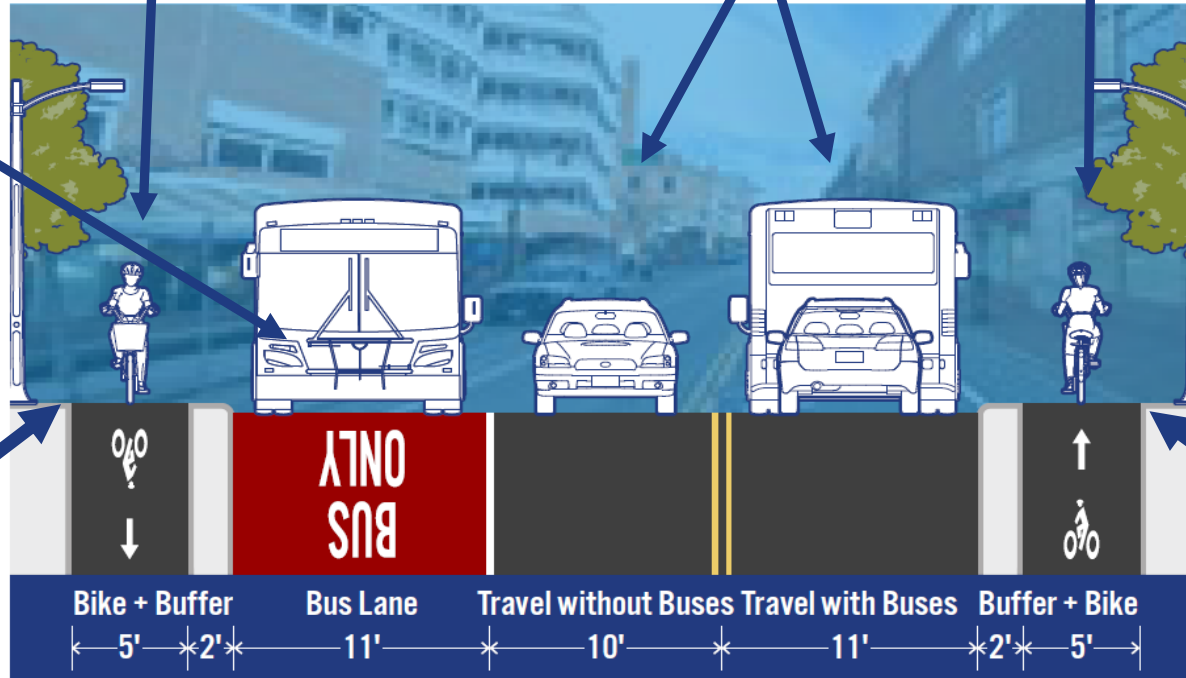


# Concept 2: First Street

Bus lane in one direction  
(portions of bus lane could be used for off-peak loading and pick-up /drop-off).

Separated, raised bicycle lanes on each side of First Street.

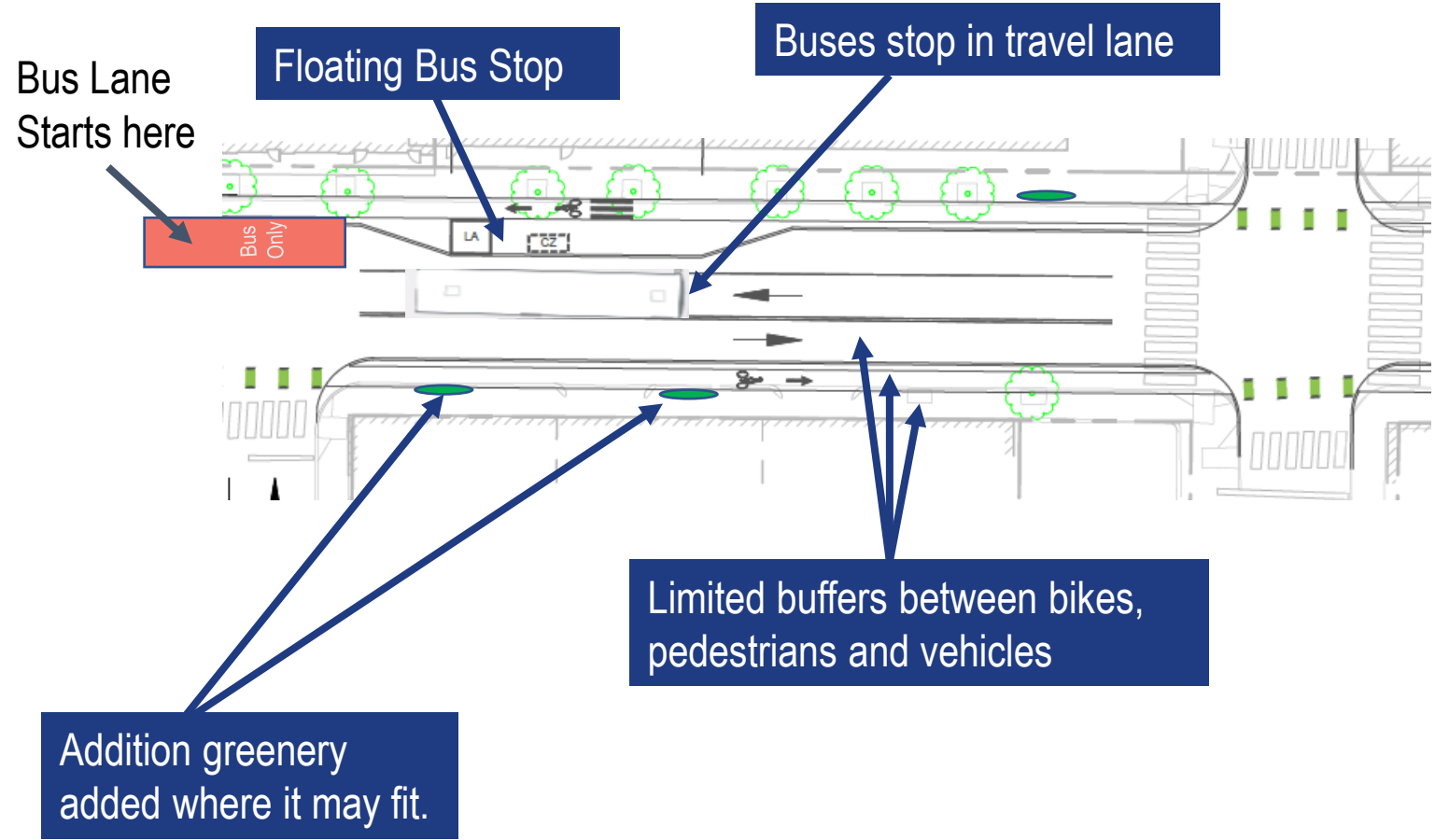
Maintains travel lanes in both direction



Adjustments to tree pits would be needed

# Concept 2: First Street

- Floating Bus stops needed for accessible bus stops that are separated from bicycle lane.
- Buses would need to stop in the travel lane at bus stops.
- Need to consolidate two EZ bus stops on each side of First Street to one bus stop on each side of street
- Some areas may have limited buffers between cyclists, pedestrians and vehicles.



# Examples of Floating Bus Stops and Raised Separated Bike Lane



Image source: google street view. Nov. 2020, Western Avenue, Cambridge MA



Image source: Rhode Island Bus stop Design Guide, April 2017.



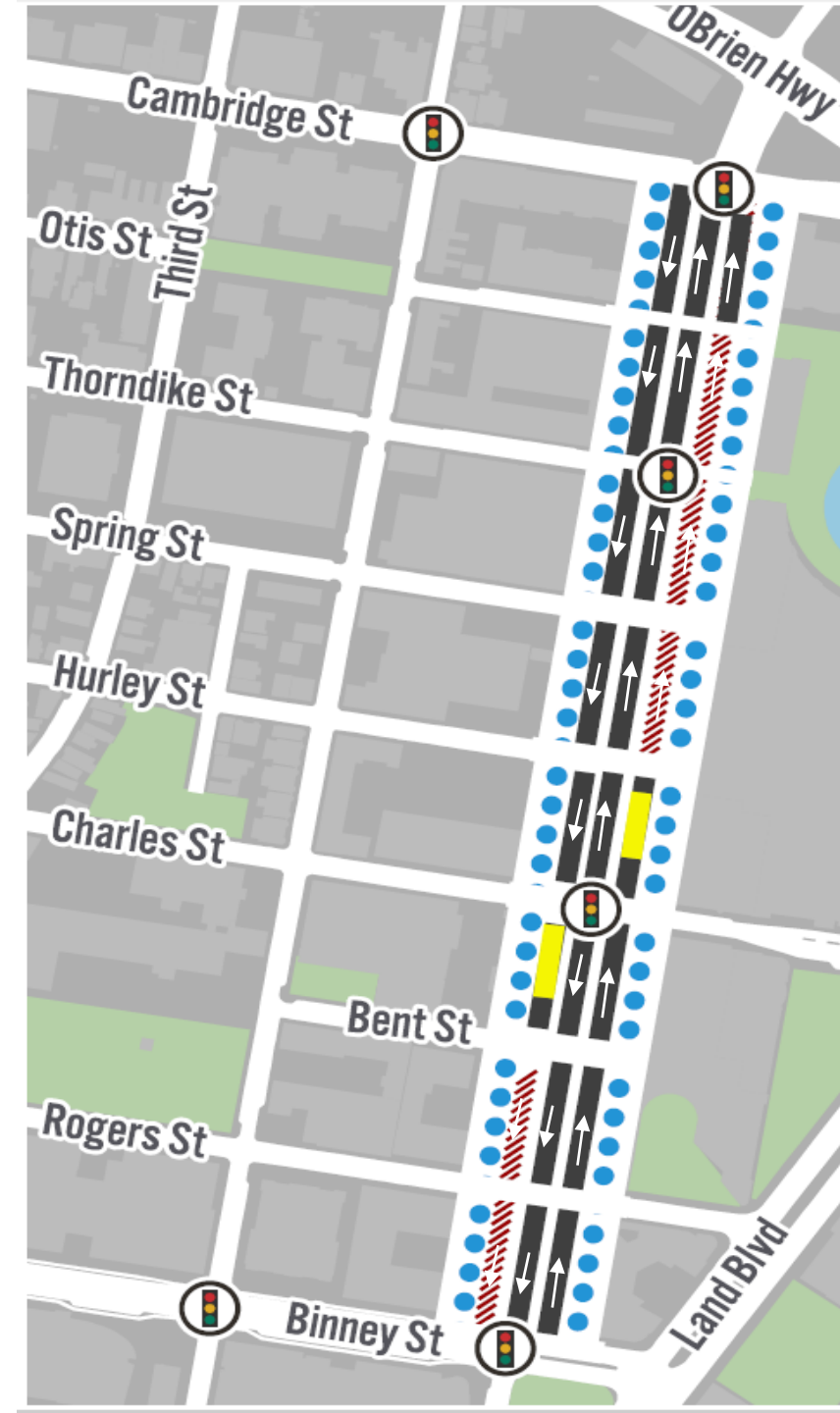
# Concept 2: Summary

## North/South Travel Between Binney Street and Cambridge Street

- First Street: Separated bike lanes and one bus lane.
- Second Street: No Changes



Map illustrates possible  
configuration of this  
Concept



# What about On-Street Parking?

- Both concepts convert existing parking on First Street to off-peak loading/drop-off/pick-up in portion of bus lane
- Accessible spaces and full-time loading zones relocated to side streets
- An initial evaluation found possibility to relocate many of spaces on First Street to cross-streets
- No changes to on-street parking on Second Street

# Overall Considerations and Tradeoffs

## Concept 1

Two Bus Lanes on First St paired with Bicycle Priority Street on Second St.

### Pros:

- Bus lanes – each direction
- Second St – reduced traffic volume and speeds
- EZ Ride – stops maintained (2 on each side)
- Loading/drop-off/pick-up – off-peak in bus lane

### Cons:

- Bike Lanes – none on First Street; Second Street bike priority, but may be out of way
- Traffic – Anticipated to shift from Second Street to other streets, including First Street
- Sidewalks – cannot be widened
- Parking – replaced with off-peak loading/drop-off/pick-up

## Concept 2

Separated bike lanes + Bus lane in one direction.

### Pros:

- Separated bicycle lanes - each direction
- Bus lanes - some bus lanes/queue jumps
- Loading/drop-off/pick-up – off-peak in bus lane
- Narrowed street – may reduce speeds

### Cons:

- Tree pits – narrower
- Buses - share portions of general travel lanes
- Bus Stops - less flexibility for siting; buses stop in travel lane
- Sidewalks – cannot be widened
- Parking – replaced with off-peak loading/drop-off/pick-up



# Next Steps

- The Project Team will consider comments and select the final concept.
- Complete a full corridor design in 2022/2023.
- Additional Stakeholder Working Group Meetings and Community Meeting as design advances.
- Implementation process and funding to be determined.

# Q + A

Please Click Q+A to submit your questions.

Please email additional questions and comments on the concepts by October 15, 2021

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**Thank you!**

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